

# THE EVENING WORLD'S RADIO PHONE SERVICE COLUMN.

By Capt. Robt. Scofield Wood  
D. F. C. M. C. Croix de Guerre with  
four palms; formerly Commander 167th  
Squadron, Royal Air Forces.

IN HONOR OF RADIO HEROES.

The annual memorial of the radio operators who have lost their lives at sea in the performance of their duty is to be held on Monday at 5 o'clock in the afternoon at the Battery Park Radio Monument in New York City. G. H. Porter, the Marine Superintendent of the Radio Corporation of America, will give an address at the monument on the great worth of radio at sea in times of peril and will speak of the heroic efforts made by the many radio operators who have stuck to their posts in order that the lives entrusted to their care might be saved and who, through their devotion to duty and the responsibilities of their office, have gone down at their keys.

J. Andrew White, one of the best known radioites in this country, will also be present to deliver an address on the radio operator's part in the broadcast reception have overlooked the fact that radio is an old established science which has proved its worth time and time again at sea in the past. To date many thousands of lives have been saved and millions of dollars' worth of property has been salvaged by the timely use of radio.

Radio fans and the general public are invited to be present at this ceremony.

NO POLITICAL SPEECHES OR GOVERNMENT RADIO.

Until a definite policy has been established by the Government regarding the use of the naval radio telephone equipment for broadcasting, no further political speeches or lectures will be sent out. This decision by Secretary Denby to curb the general use of naval equipment followed an investigation into the use of broadcasting stations by members of Congress for addressing their constituents.

Democratic members declared the use of Government radio facilities had been granted only to Republicans, and the Secretary of the Navy determined to put an end to the growing confusion.

OBSERVATION.

The last big radio show has just shut its doors, and the radio fan is preparing to enjoy the summer. Since the first of the year the Second District has had so many radio shows that it is almost necessary to get an adding machine to keep track of them. The one that just closed is conceded by all to have been the largest affair in this field attempted, and it attracted a different crowd than the first show. There was a noticeable lack of enthusiasm after the first two nights, and the crowds changed from the enthusiastic amateurs to the crowds who came as a matter of curiosity. From the remarks picked up around the floor it is evident that the public have not taken everything for granted and are beginning to be shown. Some of those who attended came straight from Missouri and, not running true to form, were not satisfied after the show. One night in New York will not be ready to accept another radio show for a long time to come. The public has had its fill and the trend is naturally to place exhibition their counterparts and duplicates are not in the market for sale, so what is the use of going to a place where only greater desire that cannot be satisfied. There was in all probability fewer radio fans in attendance at the recent show than crowded into the Manhattan's first show on its first night.

When the manufacturers and inventors have something new to put before the public and can supply the demand created immediately, then New York will be ready to have its next radio exhibition.

CHARGING STORAGE BATTERIES WITH A. C.

Vacuum tube receiving sets are on the up grade and there are now 750,000 tube sets in use at the present time. This means that there are nearly that many storage batteries in use which have to be recharged. The day has not yet come where anything has been found practical for the substitution of this unit of supply. True, there are some experimenters who are using other methods, but they have not reached a point of adaptability for use in ordinary mortals, so the storage battery stays along.

The problem of charging the ever increasing number of storage batteries assumes momentous proportions and interest, and the trend is naturally in the direction of obtaining rectifiers for charging the batteries at home rather than transporting them to and from a battery service station.

Gas filled tube rectifiers are becoming increasingly popular for this service, but while considerable progress has been made, the theory of the hot cathode rectifier, little or no data are available for the use of the amateur or its practical operation.

Among the successful types of rectifiers that have been in use for some years for charging auto storage batteries is the "tunark," which rectifies recently developed for a similar purpose in charging radio storage batteries, which differ from the auto batteries only in the thickness of the plates, which of necessity is slow steady rate of discharge. The practical application of this type for this purpose will be treated in two parts. This article and part two will appear in this column tomorrow.

The tunark sets are made in two sizes from a very small outfit for railroad signal work, which deliver only a fraction of an ampere up to the large service station outfit capable of charging a dozen or more automobile batteries at the same time. For radio work, small portable type built in two and five ampere capacity is preferable.

No attempt will be made to describe the theory of the tunark. This is generally similar to the theory of the two element vacuum tube with which the average radio fan is familiar. A simple comparison can be made by the use of a one-way valve. During one-half of the cycle current flows through the bulb from anode to cathode, that is from plate to filament, but during the other half cycle no current can flow, hence the term half wave rectifier.

At first thought the efficiency of a half wave rectifier would be very low, not over 50 per cent. Further consideration, however, will reveal the fact that on the half cycle, when no current is flowing through the bulb, the energy is being drawn from the line except a small amount for heating the filament and exciting the transformer. As a matter of fact, some of the latest types of half wave rectifiers have an efficiency as high as 80 per cent. It is quite possible to obtain full wave

## QUESTIONS AND ANSWERS

W. McIntyre, New Rochelle: "Will a vacuum gap lightning arrester be sufficient protection for my home and instruments, or is it necessary to use it in conjunction with a 600-volt switch? What is the object of keeping all wires five inches from the walls?"

Answer:—The answer to the first question is that a vacuum gap lightning arrester is not necessary to use in conjunction with a 600-volt switch. The object of keeping all wires five inches from the walls is to decrease the possibility of fire in the event of the aerial being struck by lightning. When lightning is conducted along a wire it heats the wire to a white heat, and if it were close against the side of the house it would result in a fire being started.

Edwin Sealy, City: "I have a detector and two step amplifier and a loud speaker, not of the power amplifier type. On the phone I am able to get good results, but when I use the amplifier I plug in the loud speaker it diminishes to that the sounds are barely audible. Inclosed is my hook-up. The loud speaker is connected to the amplifier. What shall I do to make it work?"

Answer—Your hook-up is O. K. and there is nothing wrong with your loud speaker. Connect the speaker to the amplifier through a switch in the plate circuit of your last amplifying lamp and you will get the necessary volume to make your loud speaker produce the results so as to fill a room as well as any phonograph.

Reader: "Is a single valve set sufficiently strong to operate with phonograph attachment?"

Answer—As a general rule there is not sufficient volume obtainable in a single tube to operate with the phonograph. The best way is to test it out and see. If you can hear distinctly everything that is said when holding the phone's ear to the speaker, it may be possible to hook it up to the talking machine and get results so that 5 or 6 persons sitting close to the instrument may hear what is going on. Another way is to use the practicality of the adaptation is to make a megaphone from a piece of cardboard and place the receiver at the small end. If this works out to your satisfaction it should work in the phonograph connection.

S. Powers, Croton: "I have a detector and two step outfit and want to add a plate and grid variometer to the set. Will you kindly explain the difference between the two and tell me how to distinguish them from each other?"

Answer—There is absolutely no difference—they are one and the same thing. They derive the grid and plate preforms from the fact that one is used in the plate circuit and the other in the grid circuit.

Rabid Fan: "I have been experimenting with crystal sets and occasionally have been able to hear stations many hundreds of miles away. One night I heard W. J. Z., which is West Virginia. I changed to a detector and three-step set, but have never been able to hear anything beyond Pittsburgh and Springfield. I would like to increase my range, and will be greatly obliged if you will tell me how."

Answer—You may have heard the station you mention, but inasmuch as it is a small amateur set I am inclined to think that some one has been playing a joke on you. If you want to listen in on the world, connect three steps of radio frequency in front of your detector unit, and with the proper aerial you will be able to listen to them all.

V. Prosser, Ridgewood: "Can I use three duo-lateral coils hooked up the same as a variocoupler and tickler coil in a regenerative set?"

Answer—Yes.

Peter Jones, Mamaroneck: "I have an R. C. set which has recently developed a loud buzz, no matter which I switch to. The buzz can be heard but the disturbance is becoming louder each day. There are no generators or fan motors in the neighborhood, and I know of no trouble must be in the set. Can you suggest what the trouble may be?"

Answer—From your description it seems to me that you have a loose connection somewhere in the circuit. Go over every connection and soldered joint carefully and see if you can't locate it.

W. J. Z. (Newark) 360 Metres.

Features for the day:  
Agricultural reports at 12 M. and 6 P. M.  
Arlington official time at 12:55 to 1 P. M. and 10:55 to 11 P. M.  
Baseball scores from 9 P. M. to 8 P. M.  
Music every hour from 11 A. M. to 6 P. M.  
Shipping news at 2:05 P. M.  
Weather reports at 11 A. M., 1 P. M., 6 P. M., 11:01 P. M.  
6:00 P. M.—"Business and Industrial"

"TIZ" FOR TIRED ACHING FEET

Just take your shoes off and then put those weary, shoe-crinkled, bunion-tortured feet of yours in a "TIZ" bath. Your toes will wiggle with joy; they'll look up at you and almost talk to you to take another dive in that "TIZ" bath.

When your feet feel like lumps of lead—all tired out—just try "TIZ." It's grand—it's glorious. Your feet will dance with joy; also you will find all pain gone from corns, callouses and bunions.

There's nothing like "TIZ." It's the only remedy that draws out all the poisonous exudations which puff up your feet and cause foot torture.

A few cents buys a box of "TIZ" at any drug or department store—don't wait. Ah! how glad your feet get, how comfortable your shoes feel—Advt.

Children's Hair

FITZGERALD'S HAIR SOAP

Conditions in the United States" as observed by the National Industrial Conference Board.

7:00 P. M.—Stories from St. Nicholas Magazine.

7:45 P. M.—"Child Welfare" by Dr. Frank Richardson, Brooklyn Chapter of Red Cross Society.

8:00 to 9:30 P. M.—Concert under the direction of Charles D. Isaacson, Music Leader of the New York Evening Mail. Programme: 1. "The Romance of Great Artists," by the Chairman; 2. a. "Romance," b. "Arabesque," c. "Debutante," d. "Scherzo," e. "Scherzo," f. "Scherzo," g. "Scherzo," h. "Scherzo," i. "Scherzo," j. "Scherzo," k. "Scherzo," l. "Scherzo," m. "Scherzo," n. "Scherzo," o. "Scherzo," p. "Scherzo," q. "Scherzo," r. "Scherzo," s. "Scherzo," t. "Scherzo," u. "Scherzo," v. "Scherzo," w. "Scherzo," x. "Scherzo," y. "Scherzo," z. "Scherzo," aa. "Scherzo," ab. "Scherzo," ac. "Scherzo," ad. "Scherzo," ae. "Scherzo," af. "Scherzo," ag. "Scherzo," ah. "Scherzo," ai. "Scherzo," aj. "Scherzo," ak. "Scherzo," al. "Scherzo," am. "Scherzo," an. "Scherzo," ao. "Scherzo," ap. "Scherzo," aq. "Scherzo," ar. "Scherzo," as. "Scherzo," at. "Scherzo," au. "Scherzo," av. "Scherzo," aw. "Scherzo," ax. "Scherzo," ay. "Scherzo," az. "Scherzo," ba. "Scherzo," bb. "Scherzo," bc. "Scherzo," bd. "Scherzo," be. "Scherzo," bf. "Scherzo," bg. "Scherzo," bh. "Scherzo," bi. "Scherzo," bj. "Scherzo," bk. "Scherzo," bl. "Scherzo," bm. "Scherzo," bn. "Scherzo," bo. "Scherzo," bp. "Scherzo," bq. "Scherzo," br. "Scherzo," bs. "Scherzo," bt. "Scherzo," bu. "Scherzo," bv. "Scherzo," bw. "Scherzo," bx. "Scherzo," by. "Scherzo," bz. "Scherzo," ca. "Scherzo," cb. "Scherzo," cc. "Scherzo," cd. "Scherzo," ce. "Scherzo," cf. "Scherzo," cg. "Scherzo," ch. "Scherzo," ci. "Scherzo," cj. "Scherzo," ck. "Scherzo," cl. "Scherzo," cm. "Scherzo," cn. "Scherzo," co. "Scherzo," cp. "Scherzo," cq. "Scherzo," cr. "Scherzo," cs. "Scherzo," ct. "Scherzo," cu. "Scherzo," cv. "Scherzo," cw. "Scherzo," cx. "Scherzo," cy. "Scherzo," cz. "Scherzo," da. "Scherzo," db. "Scherzo," dc. "Scherzo," dd. "Scherzo," de. "Scherzo," df. "Scherzo," dg. "Scherzo," dh. "Scherzo," di. "Scherzo," dj. "Scherzo," dk. "Scherzo," dl. "Scherzo," dm. "Scherzo," dn. "Scherzo," do. "Scherzo," dp. "Scherzo," dq. "Scherzo," dr. "Scherzo," ds. "Scherzo," dt. "Scherzo," du. "Scherzo," dv. "Scherzo," dw. "Scherzo," dx. "Scherzo," dy. "Scherzo," dz. "Scherzo," ea. "Scherzo," eb. "Scherzo," ec. "Scherzo," ed. "Scherzo," ee. "Scherzo," ef. "Scherzo," eg. "Scherzo," eh. "Scherzo," ei. "Scherzo," ej. "Scherzo," ek. "Scherzo," el. "Scherzo," em. "Scherzo," en. "Scherzo," eo. "Scherzo," ep. "Scherzo," eq. "Scherzo," er. "Scherzo," es. "Scherzo," et. "Scherzo," eu. "Scherzo," ev. "Scherzo," ew. "Scherzo," ex. "Scherzo," ey. "Scherzo," ez. "Scherzo," fa. "Scherzo," fb. "Scherzo," fc. "Scherzo," fd. "Scherzo," fe. "Scherzo," ff. "Scherzo," fg. "Scherzo," fh. "Scherzo," fi. "Scherzo," fj. "Scherzo," fk. "Scherzo," fl. "Scherzo," fm. "Scherzo," fn. "Scherzo," fo. "Scherzo," fp. "Scherzo," fq. "Scherzo," fr. "Scherzo," fs. "Scherzo," ft. "Scherzo," fu. "Scherzo," fv. "Scherzo," fw. "Scherzo," fx. "Scherzo," fy. "Scherzo," fz. "Scherzo," ga. "Scherzo," gb. "Scherzo," gc. "Scherzo," gd. "Scherzo," ge. "Scherzo," gf. "Scherzo," gg. "Scherzo," gh. "Scherzo," gi. "Scherzo," gj. "Scherzo," gk. "Scherzo," gl. "Scherzo," gm. "Scherzo," gn. "Scherzo," go. "Scherzo," gp. "Scherzo," gq. "Scherzo," gr. "Scherzo," gs. "Scherzo," gt. "Scherzo," gu. "Scherzo," gv. "Scherzo," gw. "Scherzo," gx. "Scherzo," gy. "Scherzo," gz. "Scherzo," ha. "Scherzo," hb. "Scherzo," hc. "Scherzo," hd. "Scherzo," he. "Scherzo," hf. "Scherzo," hg. "Scherzo," hh. "Scherzo," hi. "Scherzo," hj. "Scherzo," hk. "Scherzo," hl. "Scherzo," hm. "Scherzo," hn. "Scherzo," ho. "Scherzo," hp. "Scherzo," hq. "Scherzo," hr. "Scherzo," hs. "Scherzo," ht. "Scherzo," hu. "Scherzo," hv. "Scherzo," hw. "Scherzo," hx. "Scherzo," hy. "Scherzo," hz. "Scherzo," ia. "Scherzo," ib. "Scherzo," ic. "Scherzo," id. "Scherzo," ie. "Scherzo," if. "Scherzo," ig. "Scherzo," ih. "Scherzo," ii. "Scherzo," ij. "Scherzo," ik. "Scherzo," il. "Scherzo," im. "Scherzo," in. "Scherzo," io. "Scherzo," ip. "Scherzo," iq. "Scherzo," ir. "Scherzo," is. "Scherzo," it. "Scherzo," iu. "Scherzo," iv. "Scherzo," iw. "Scherzo," ix. "Scherzo," iy. "Scherzo," iz. "Scherzo," ja. "Scherzo," jb. "Scherzo," jc. "Scherzo," jd. "Scherzo," je. "Scherzo," jf. "Scherzo," jg. "Scherzo," jh. "Scherzo," ji. "Scherzo," jj. "Scherzo," jk. "Scherzo," jl. "Scherzo," jm. "Scherzo," jn. "Scherzo," jo. "Scherzo," jp. "Scherzo," jq. "Scherzo," jr. "Scherzo," js. "Scherzo," jt. "Scherzo," ju. "Scherzo," jv. "Scherzo," jw. "Scherzo," jx. "Scherzo," jy. "Scherzo," jz. "Scherzo," ka. "Scherzo," kb. "Scherzo," kc. "Scherzo," kd. "Scherzo," ke. "Scherzo," kf. "Scherzo," kg. "Scherzo," kh. "Scherzo," ki. "Scherzo," kj. "Scherzo," kl. "Scherzo," km. "Scherzo," kn. "Scherzo," ko. "Scherzo," kp. "Scherzo," kq. "Scherzo," kr. "Scherzo," ks. "Scherzo," kt. "Scherzo," ku. "Scherzo," kv. "Scherzo," kw. "Scherzo," kx. "Scherzo," ky. "Scherzo," kz. "Scherzo," la. "Scherzo," lb. "Scherzo," lc. "Scherzo," ld. "Scherzo," le. "Scherzo," lf. "Scherzo," lg. "Scherzo," lh. "Scherzo," li. "Scherzo," lj. "Scherzo," lk. "Scherzo," ll. "Scherzo," lm. "Scherzo," ln. "Scherzo," lo. "Scherzo," lp. "Scherzo," lq. "Scherzo," lr. "Scherzo," ls. "Scherzo," lt. "Scherzo," lu. "Scherzo," lv. "Scherzo," lw. "Scherzo," lx. "Scherzo," ly. "Scherzo," lz. "Scherzo," ma. "Scherzo," mb. "Scherzo," mc. "Scherzo," md. "Scherzo," me. "Scherzo," mf. "Scherzo," mg. "Scherzo," mh. "Scherzo," mi. "Scherzo," mj. "Scherzo," mk. "Scherzo," ml. "Scherzo," mm. "Scherzo," mn. "Scherzo," mo. "Scherzo," mp. "Scherzo," mq. "Scherzo," mr. "Scherzo," ms. "Scherzo," mt. "Scherzo," mu. "Scherzo," mv. "Scherzo," mw. "Scherzo," mx. "Scherzo," my. "Scherzo," mz. "Scherzo," na. "Scherzo," nb. "Scherzo," nc. "Scherzo," nd. "Scherzo," ne. "Scherzo," nf. "Scherzo," ng. "Scherzo," nh. "Scherzo," ni. "Scherzo," nj. "Scherzo," nk. "Scherzo," nl. "Scherzo," nm. "Scherzo," nn. "Scherzo," no. "Scherzo," np. "Scherzo," nq. "Scherzo," nr. "Scherzo," ns. "Scherzo," nt. "Scherzo," nu. "Scherzo," nv. "Scherzo," nw. 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"Scherzo," vn. "Scherzo," vo. "Scherzo," vp. "Scherzo," vq. "Scherzo," vr. "Scherzo," vs. "Scherzo," vt. "Scherzo," vu. "Scherzo," vv. "Scherzo," vw. "Scherzo," vx. "Scherzo," vy. "Scherzo," vz. "Scherzo," wa. "Scherzo," wb. "Scherzo," wc. "Scherzo," wd. "Scherzo," we. "Scherzo," wf. "Scherzo," wg. "Scherzo," wh. "Scherzo," wi. "Scherzo," wj. "Scherzo," wk. "Scherzo," wl. "Scherzo," wm. "Scherzo," wn. "Scherzo," wo. "Scherzo," wp. "Scherzo," wq. "Scherzo," wr. "Scherzo," ws. "Scherzo," wt. "Scherzo," wu. "Scherzo," wv. "Scherzo," ww. "Scherzo," wx. "Scherzo," wy. "Scherzo," wz. "Scherzo," xa. "Scherzo," xb. "Scherzo," xc. "Scherzo," xd. "Scherzo," xe. "Scherzo," xf. "Scherzo," xg. "Scherzo," xh. "Scherzo," xi. "Scherzo," xj. "Scherzo," xk. "Scherzo," xl. "Scherzo," xm. "Scherzo," xn. "Scherzo," xo. "Scherzo," xp. "Scherzo," xq. "Scherzo," xr. "Scherzo," xs. "Scherzo," xt. "Scherzo," xu. "Scherzo," xv. "Scherzo," xw. "Scherzo," xx. "Scherzo," xy. "Scherzo," xz. "Scherzo," ya. "Scherzo," yb. "Scherzo," yc. "Scherzo," yd. "Scherzo," ye. "Scherzo," yf. "Scherzo," yg. "Scherzo," yh. "Scherzo," yi. "Scherzo," yj. "Scherzo," yk. "Scherzo," yl. "Scherzo," ym. "Scherzo," yn. "Scherzo," yo. "Scherzo," yp. "Scherzo," yq. "Scherzo," yr. "Scherzo," ys. "Scherzo," yt. "Scherzo," yu. "Scherzo," yv. "Scherzo," yw. "Scherzo," yx. "Scherzo," yy. "Scherzo," yz. "Scherzo," za. "Scherzo," zb. "Scherzo," zc. "Scherzo," zd. "Scherzo," ze. "Scherzo," zf. "Scherzo," zg. "Scherzo," zh. "Scherzo," zi. "Scherzo," zj. "Scherzo," zk. "Scherzo," zl. "Scherzo," zm. "Scherzo," zn. "Scherzo," zo. "Scherzo," zp. "Scherzo," zq. "Scherzo," zr. "Scherzo," zs. "Scherzo," zt. "Scherzo," zu. "Scherzo," zv. "Scherzo," zw. "Scherzo," zx. "Scherzo," zy. "Scherzo," zz.

8:30 P. M.—Concert by the Melrose Quartette of New York City; Chester A. Hawkes, Musical Director and Accompanist. Programme: 1. "Everybody is Welcome in Dixie," Mohr; 2. "Dear Old Southland," Layton; 3. "Baritone Solo by George Jones"; 4. "Thank God for a Garden," Del Reigo; 5. "Negro Spirituals," "I Want to Be Ready," "Every Time I Feel the Spirit," "Rolling in Jesus Arms," "I Got a Robe," "Hallelujah," "Banjo solo by Fred Jennings," "Sixteen from Lucia," Donizetti; 6. "Ain't It Shame to steal on Sunday," 7. Bass solo by Albert B. Hawkes; 8. "Amour or Son," De Koven; 9. Exhortation (Negro sermon), Cook; 10. "Look for the Silver Lining," Kern; 11. "Medley of Southern Airs."

K D K A (Pittsburgh-340 Metres.

8:30 P. M. and at 15 minute intervals thereafter, baseball scores.

7 P. M. Baseball scores, news weekly survey of business conditions, by the National Industrial Conference Board.

7:45 P. M. Government market reports, and a report of the New York Stock Exchange.

8 P. M. Baseball scores, "The Future of Pittsburgh's Aerial Activities," by A. H. Krigger, Secretary of the Aero Club.

8:30 P. M. "Tom Tidd," "The State and the Nation-in-Law," bedtime stories for the kiddies.

9 P. M. Music.

10 P. M. Baseball scores.

10:55 P. M. Arlington time signals.

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## J. A. WYETH, NOTED SURGEON-AUTHOR, DIES AT AGE OF 77

He Was Founder of Polyclinic Hospital and Writer of Numerous Books.

Dr. John A. Wyeth, seventy-seven, founder of the Polyclinic Hospital, is dead of heart disease at his home, No. 24 Lexington Avenue.

He was widely known in the United States as an author as well as a surgeon and physician. His works include essays, "Text-Book on Surgery," "Life of Gen. N. B. Forrest," "With Sabre and Scalpel," "The Autobiography of a Soldier and Surgeon," and many medical, historical and biographical sketches. He established a vast practice in New York City after years of travelling through Europe, where he supplemented his medical education. In 1913 Dr. Wyeth's first wife died, and in 1918 he married Miss Margaret Chalfout of North Hampton, Mass. who is a lecturer at the hospital on dietetics.

HYLAN